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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,404

09/25/2006

Guy M. Besson

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01/22/2010

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EXAMINER

NGUYEN, HIEN NGOC

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

01/22/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,404	<b>Applicant(s)</b> BESSON ET AL.	
	<b>Examiner</b> HIEN NGUYEN	<b>Art Unit</b> 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 2-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 29-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/05/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/15/2009 has been entered.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: the “;” after x-ray source should be deleted. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 29-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Nields et al. (U.S. 6,102,866).

Nields discloses a system comprising:

Art Unit: 3768

- a breast immobilizing device; (see abstract, col. 3, lines 25-40 and col. 5, lines 44-52).
- an x-ray source for producing a beam of x-rays that selectively rotating about a selected pivot axis, the beam irradiating a patient's breast positioned in the immobilizing device, the irradiating being along a multiplicity of different directions of the beam relative to the breast and taking, place while the breast remains immobilized; (see col. 5, lines 44-52).
- an imager for detecting x-rays within the beam that have passed through the patient's breast to generate x-ray image, data describing a multiplicity of initial x-ray images related to multiplicity of directions along which the x-ray beam irradiates the breast; (see col.5, lines 44-52 and lines 35-40).
- an ultrasound system for acquiring a pre-scan ultrasound image data of the breast for optimizing exposure parameters of the x-ray imaging source; (see Fig.1, element 100 is the ultrasound system for acquiring ultrasound images). Examiner interprets pre-scan ultrasound image data to be ultrasound image data acquire from an ultrasound scan before an x-ray scan. The system has a structure that is capable of acquiring a pre-scan ultrasound image data.
- the ultrasound system includes at least one ultrasound transducer that both emits and receives ultrasound signals and is at one side of the breast; (see col. 3, lines 30-36 and Fig. 1, element 100). It is inherent that

the transducer both emits and receives ultrasound signals in order to form an ultrasound image.

- ultrasound system includes at least two ultrasound transducers that are at opposite sides of the breast; (see col. 11, lines 1-5). Nields discloses plurality of transducers. The system is capable of placing transducers at opposite sides of the breast.
- pivot axis is at a focal spot from which the x-ray beam emanates; (see col. 5, lines 44-52).
- a processing system for processing the x-ray image data and the ultrasound image data and producing at least one processed x-ray image of the breast suitable for display and at least one processed ultrasound image suitable for display in which the processed x-ray image is a projection image; (see col. 2, lines 1-5 and claims 5 and 6). The processor is processing x-ray and ultrasound image of the breast for display
- a display system for concurrently displaying the processed x-ray image and the processed ultrasound image in which the concurrently displayed processed x-ray and ultrasound images are at different orientations relative to the breast; (see Fig. 6, elements 62a for x-ray and 62b for ultrasound, element 60 is the display and col. 8, lines 17-42).
- the image detector and ultrasound system are located in the same housing; (see col. 3, lines 25-40, col. 9, lines 15-20 and Fig. 5). The ultrasound head cover by the housing transmit and receive (detect)

Art Unit: 3768

ultrasound signals to form an ultrasound images therefore the image detector of the ultrasound must be located in the same housing. Examiner interpret image detector as the signal receiving portion of the ultrasound system.

- the image detector and ultrasound system are selectably connectable; (see col. 3, lines 25-40 and Fig. 5). The image detect is within the ultrasound head therefore it must be connected to the ultrasound system.
- a rotating x-ray source and a detector positioned to receive x-rays from the rotating source during an x-ray scan of the patient's breast; (see col. 5, lines 44-52 and col. 6, lines 13-42).
- a driving mechanism, coupled to both the x-ray imaging system and the ultrasound imaging system for controlling movement of the x-ray imaging system and the ultrasound imaging system during x-ray image and ultrasound image acquisition; it is inherent that the system has a driving mechanism because the system is rotating and the driving mechanism cause this rotation.
- the system discloses by Nields is capable of having the x-ray scan follows the pre-scan;

### ***Response to Arguments***

Applicant's argument filed 12/15/2009 has been fully considered but it is not persuasive. Applicant argues Nields does not teach an ultrasound system for acquiring a pre-scan ultrasound image data of the breast for optimizing exposure parameters of the x-ray source. Applicant's argument is not persuasive because Nields discloses a structure/ultrasound system that is capable of performing the function claim by applicant (see Fig.1, element 100 is the ultrasound system for acquiring ultrasound images).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HIEN NGUYEN whose telephone number is (571)270-7031. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. N./

Examiner, Art Unit 3768

/Long V Le/

Supervisory Patent Examiner, Art Unit 3768